

St. Louis District Water Data and Watershed Management Website USER GUIDE

Joel Asunskis, P.E.

June 1, 2011



US Army Corps of Engineers
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Website Layout

Website
Navigation
Table

Special
Notes/Messages

U.S. Army Corps of Engineers-St. Louis District-Water Management - Windows Internet Explorer

http://mvs-wc.mvs.usace.army.mil/index_new.html

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U.S. Army Corps of Engin... U.S. Army Corps of Engineers... U.S. Army Corps of Engineers...

 **US Army Corps of Engineers**
St. Louis District BUILDING STRONG®

Water Management

The St. Louis District is responsible for maintaining the waterways that flow through a large part of Eastern Missouri and Southwestern Illinois. Located within the District's boundaries are 300 miles of the Mississippi River, including its four most southerly Lock and Dams and its confluence with the Missouri and Illinois River. Also included are several tributary rivers, dozens of other small streams, and five multi-purpose reservoirs - Lake Shelbyville, Carlyle Lake, Rend Lake, Mark Twain Lake, and Lake Wappapello. These waterways must continually be monitored and regulated to facilitate a number of purposes. The mission of St. Louis District Office of Water Control is to perform these responsibilities.

The Office of Water Management is a combination of two separate sections within the Hydrologic and Hydraulics Branch:

- Water Data Management
- Water Control Operations


How to use this website: Webguide.pdf
[COMING SOON!]


Flood Fight Clarksville, MO - June 2008

Available Information

- Water Management Data
- Weather Information
- Navigation Information
- Flood Frequency Study Profiles
- Environmental Management Resources
- Research and Study Results
- Links of Interest
- St. Louis District Homepage

Special Notices

[16May2011 11:11]: The below link is to an updated version of the web page for the St. Louis District Water Data and Watershed Management Section. Overall content has not changed. Please take a look and send comments to the webmaster: joel.p.asunskis@usace.army.mil

Environmental Stewardship

- Fish Spawn Information
- Environmental Pool Management
- A "Green" Approach to Water Management Practice

Trusted sites 100%



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Website Navigation and Content Description



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Available Water Data

- River and Reservoir Reports
 - ▶ 6AM Water Levels with associated 3 day forecast.
 - ▶ Updated Daily with afternoon forecasts.
- River Gage Data, Current Conditions
 - ▶ Water level plots, tables, and descriptions
 - ▶ Real time gage readings
 - ▶ Updated every 15 Minutes
 - ▶ Plots and Tables every 30 Minutes
- L&D Gate Report
 - ▶ Table of Pool, Tail water, and Gate Settings
 - ▶ Updated every 15 Minutes

| Water Management Data |
|-------------------------------------|
| River and Reservoir Reports |
| River Gage Data, Current Conditions |
| Lock & Dam Gate Report |
| Project Flow Data |
| Mississippi |
| Missouri |
| Illinois |
| Meramec |
| Mississippi Tribs |
| Carlyle |
| Kaskaskia Navigation Project |
| Shelbyville |
| Mark Twain |
| Mark Twain Project DO Data Plots |
| Rend |
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RIVER AND RESERVOIR REPORT - Windows Internet Explorer

http://mvs-wc.mvs.usace.army.mil/dresriv.html

U.S. ARMY CORPS OF ENGINEERS, ST. LOUIS DISTRICT, RIVER & RESERVOIR DAILY REPORT
(PHONE: 800-432-1208)

NOTE: ALL WATER LEVELS GIVEN IN STAGE, UNLESS INDICATED (GAGE ZERO + STAGE = ELEVATION {el}) FORECASTS INCLUDE OBSERVED PRECIP UP TO 6AM TODAY + EXPECTED PRECIP TO 6AM TOMORROW ONLY.

LAST MODIFIED: Tuesday - December 15, 2009 7:49 AM

| River Mile | Gage Station | 6am Levels | 24hr Chg | National Weather Service River Forecast | | | | Flood Level | Gage Zero | Record Level | Record Date |
|-------------------|-------------------------|------------|----------|---|-------|-------|----------------|-------------|-----------|--------------|-------------|
| | | | | Next 3 days | 12/16 | 12/17 | 12/18 | | | | |
| MISSISSIPPI RIVER | | | | | | | | | | | |
| 309.0 | Hannibal | 10.8 | -0.1 | 10.9 | 10.9 | 10.8 | 12/14/09 19:47 | 16.0 | 449.43 | 31.80 | 7-16-93 |
| 301.2 | L&D 22 TW | 5.9 | 0.2 | | | | | 16.0 | 446.10 | 29.58 | 7-25-93 |
| 282.9 | Louisiana | 12.0 | -0.1 | | | | | 15.0 | 437.33 | 28.40 | 7-28-93 |
| 273.5 | L&D 24 HW (elev) | 449.0 | -0.1 | | | | | | 421.81 | | |
| 273.2 | L&D 24 TW | 16.2 | 0.2 | | | | | 25.0 | 421.81 | 37.70 | 7-29-93 |
| 260.3 | Mosier Landing (elev) | 435.6 | 0.1 | | | | | 441.0 | 400.00 | 454.30 | 7-29-93 |
| 241.5 | L&D 25 HW (elev) | 434.0 | 0.1 | | | | | | 407.00 | | |
| 241.2 | L&D 25 TW | 16.1 | 0.3 | | | | | 26.0 | 407.00 | 39.60 | 8-1-93 |
| 218.6 | Grafton | 16.1 | 0.1 | 15.9 | 15.8 | 15.8 | 12/14/09 19:47 | 18.0 | 403.79 | 38.20 | 8-1-93 |
| 201.1 | Mel Price L&D HW (elev) | 419.0 | 0.1 | | | | | | 395.48 | | |
| 200.5 | Mel Price L&D TW | 7.4 | 0.2 | 7.7 | 7.2 | 6.6 | 12/14/09 19:47 | 21.0 | 395.48 | 42.70 | 8-1-93 |
| 180.0 | St. Louis | 8.4 | -0.1 | 8.7 | 7.9 | 7.0 | 12/14/09 19:47 | 30.0 | 379.94 | 49.58 | 8-1-93 |
| 136.0 | Brickeys Landing | 10.7 | -0.7 | | | | | 26.0 | 357.78 | 47.00 | 8-5-93 |
| 109.9 | Chester | 12.7 | -0.7 | 12.8 | 12.6 | 11.8 | 12/14/09 19:47 | 27.0 | 341.05 | 49.70 | 8-7-93 |
| 52.1 | Cape Girardeau | 19.8 | -0.2 | 19.5 | 19.0 | 18.5 | 12/14/09 21:03 | 32.0 | 304.65 | 47.90 | 8-8-93 |
| 43.7 | Thebes | 18.8 | -0.3 | | | | | 33.0 | 300.00 | 45.50 | 8-7-93 |
| 20.2 | Thompson Landing | 28.9 | 0.0 | | | | | 39.0 | 280.00 | 51.95 | 5-28-95 |
| 2.0 | Birds Point | 35.1 | 0.6 | | | | | 38.0 | 274.53 | | |
| ILLINOIS RIVER | | | | | | | | | | | |
| 263.1 | Morris | 0.0 | 0.0 | 6.0 | 5.8 | 5.7 | 12/14/09 19:17 | 13.0 | 478.50 | 24.60 | 2-24-85 |
| 224.7 | La Salle | 14.4 | 0.1 | 14.2 | 13.8 | 13.4 | 12/14/09 19:17 | 20.0 | 430.00 | 32.05 | 12-5-82 |
| 164.6 | Peoria | 12.9 | -0.0 | 12.9 | 12.9 | 12.9 | 12/14/09 19:17 | 18.0 | 428.40 | 28.80 | 5-23-43 |
| | | 14.1 | -0.2 | 13.7 | 13.3 | 13.0 | 12/14/09 19:17 | 14.0 | 419.90 | 29.60 | 5-26-43 |
| | | 430.7 | -0.2 | 430.5 | 430.3 | 430.0 | | 432.0 | 418.00 | 446.69 | 5-26-43 |
| | | 11.2 | -0.1 | 10.9 | 10.6 | 10.3 | | 11.0 | 418.00 | 26.91 | 5-26-43 |
| | | 28.5 | -0.2 | | | | | 24.3 | 400.00 | 43.60 | 8-1-93 |
| | | 22.7 | 0.0 | 22.6 | 22.4 | 22.2 | | 25.0 | 400.00 | 42.30 | 8-3-93 |

6AM
Levels
and
Changes

3 Day
NWS
Forecast
s

River and Reservoir Report

- 6AM Water Levels with associated 3 day NWS forecast.
- Update Daily with afternoon forecasts.



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River and Reservoir Report

- Lake Information at Bottom of Page
 - Includes USACE Lake Level Forecast after rain events

dsf – day second feet, averaged daily flow

cfs – cubic feet per second, instantaneous reading

| Lake | Midnight Pool Level (elev) | 24hr Chg | Storage Utilized | | Precip (in.) | Yesterdays Inflow (dsf) | Controlled Outflow (cfs) | | Seasonal Rule Curve (ft.) | Pool Forecast | | Record Level | Record Date |
|------------------|----------------------------|----------|------------------|-------|--------------|-------------------------|--------------------------|---------|---------------------------|---------------|----------|--------------|-------------|
| | | | Consr | Flood | | | Midnight | Evening | | Crest | Date | | |
| BIG MUDDY RIVER | | | | | | | | | | | | | |
| 86.6 Plumfield | | | 16.0 | -0.5 | | | | | | 20.0 | 353.24 | 31.8 | 5-1-96 |
| 36.6 Murphysboro | | | 13.4 | -0.9 | | | | | | 22.0 | 335.50 | 42.0 | 5-15-61 |
| Shelbyville | 613.62 | 0.10 | 100.0 | 42.2 | 0.00 | 2840 | 1930 | 1930 | 594.0 | < 614.0 | 12/14 | 620.26 | 6-29-1974 |
| Carlyle | 450.25 | 0.19 | 100.0 | 21.5 | 0.00 | 9390 | 6220 | 6220 | 443.0 | 450.5 | 12/15 PM | 459.80 | 5-18-2002 |
| Rend | 408.85 | 0.17 | 100.0 | 75.4 | 0.00 | 2510 | 690 | 710 | 405.0 | | | 413.83 | 5-19-1995 |
| Wappapello | 370.37 | -0.24 | 100.0 | 24.7 | 0.00 | 1650 | 3400 | 3400 | 354.74 | | | 399.09 | 4-16-1945 |
| Mark Twain | 609.49 | -0.80 | 100.0 | 7.7 | 0.00 | 510 | 8570 | 4000 | 606.0 | | | 640.36 | 7-30-2008 |

[Home](#)



Jump to
Project
Flow Data
Plots

Latest Water
Level and 24hr
Change – Link
to tabularized
data and plot

Record Highs
and Lows

Jump to the
Different
Rivers

NWS
Flood
Levels

Gage
Description
Links and
Google
Earth
Mapped
Locations

Time of Last
reading

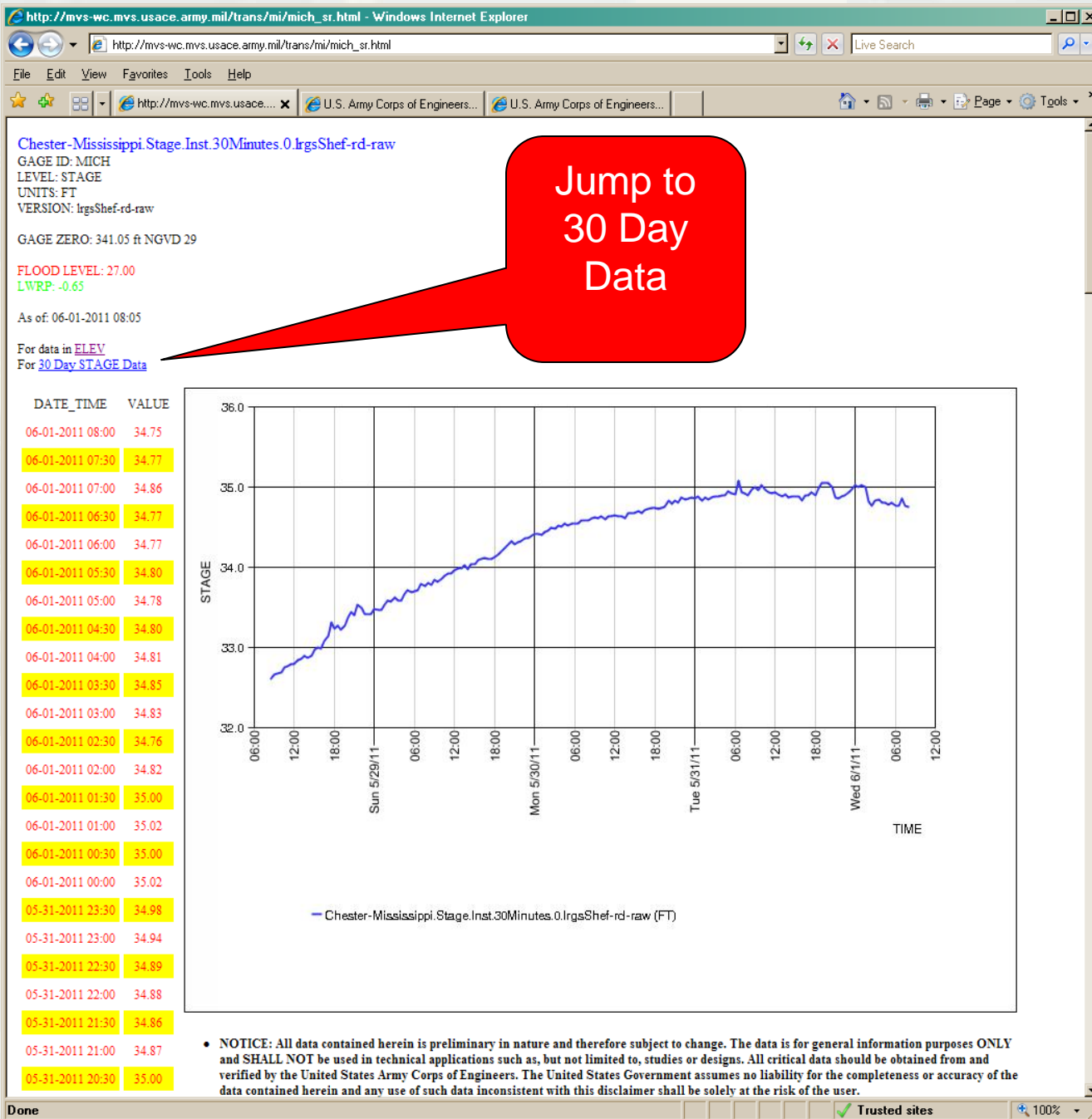
6 and 24 Hr
Incremental
Rainfall – Link
to tabularized
data and plot

River Gage Data, Current Conditions

- Water level tables with gage descriptions links
- DCP gage readings
- Table updated every 15 Minutes



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Plots and Tabular Data

- Plots and tables showing past 4 or 30 days of gage readings
- Updated every 15 Minutes (30 day data once a day)



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Lock and Dam Gate Report

- Table of Pool, Tail water, and Gate Settings
- Update every 15 Minutes

MVS L&D Report - Windows Internet Explorer

http://mvs-wc.mvs.usace.army.mil/realtime/ga

MVS L&D REPORT
As of: 12-15-2009 07:33

MISSISSIPPI RIVER AT L&D 24

| Date | Pool (ft) | Tailwater (ft) | Tainter (ft) |
|------------------|-----------|----------------|--------------|
| 12-15-2009 07:00 | 448.95 | 16.19 | |
| 12-15-2009 06:00 | 448.98 | 16.17 | 23 |
| 12-15-2009 05:00 | 448.99 | 16.21 | |
| 12-15-2009 04:00 | 448.99 | 16.19 | 23 |
| 12-15-2009 03:00 | 448.96 | 16.21 | |
| 12-15-2009 02:00 | 448.94 | 16.19 | 23 |
| 12-15-2009 01:00 | 448.97 | 16.18 | |
| 12-15-2009 00:00 | 448.98 | 16.18 | 23 |
| 12-14-2009 23:00 | 448.96 | 16.17 | |
| 12-14-2009 22:00 | 448.96 | 16.16 | 23 |
| 12-14-2009 21:00 | 448.91 | 16.25 | |
| 12-14-2009 20:00 | 448.95 | 16.19 | 23 |
| 12-14-2009 19:00 | 448.95 | 16.18 | |
| 12-14-2009 18:00 | 448.94 | 16.2 | 23 |
| 12-14-2009 17:00 | 448.97 | 16.21 | |
| 12-14-2009 16:00 | 448.94 | 16.19 | 23 |
| 12-14-2009 15:00 | 448.94 | 16.17 | |
| 12-14-2009 14:00 | 449 | 16.14 | 23 |
| 12-14-2009 13:00 | 449.05 | 16.08 | |
| 12-14-2009 12:00 | 449.09 | 15.97 | 21.5 |
| 12-14-2009 11:00 | 449.11 | 15.93 | |
| 12-14-2009 10:00 | 449.07 | 15.93 | 20.5 |
| 12-14-2009 09:00 | 449.07 | 15.94 | |
| 12-14-2009 08:00 | 449.07 | 15.94 | 20.5 |
| 12-14-2009 07:00 | 449.06 | 15.95 | |

MISSISSIPPI RIVER AT L&D 25

| Date | Pool (ft) | Tailwater (ft) | Tainter (ft) | Roller (ft) |
|------------------|-----------|----------------|--------------|-------------|
| 12-15-2009 07:00 | 434.01 | 16.12 | | |
| 12-15-2009 06:00 | 434.02 | 16.1 | 49 | 0 |
| 12-15-2009 05:00 | 434.01 | 16.12 | | |
| 12-15-2009 04:00 | 433.99 | 16.12 | 40 | 0 |

Done Trusted sites 100%

Total Gate
Openings
Whether Tainter
or Roller

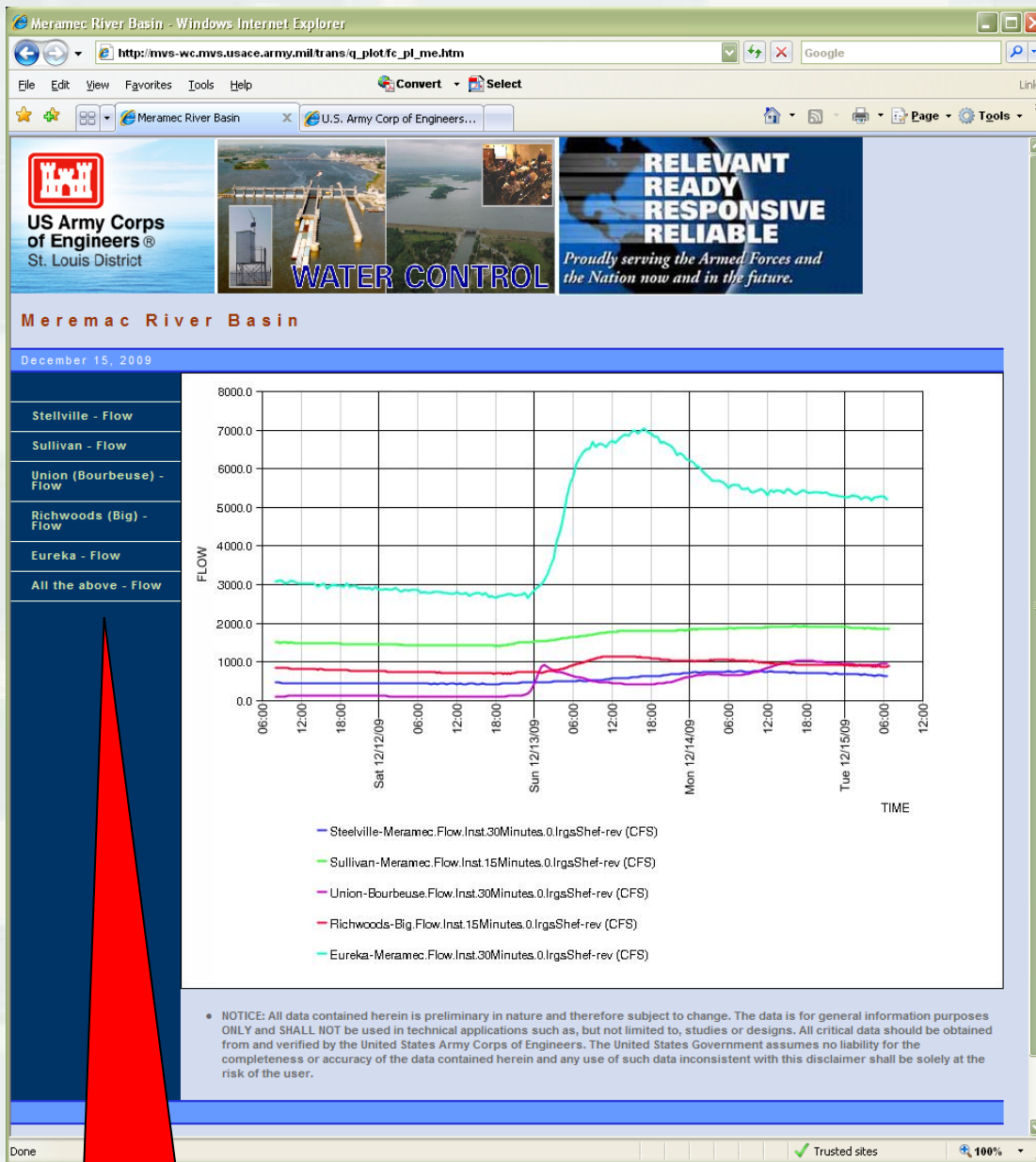


Available Water Data

- Project Flow Data
 - ▶ Various Water Level and Flow Plots by project.
 - ▶ Uses accepted USGS/USACE flow ratings.
 - ▶ Updated every 30 Minutes.
- Gage Precipitation
 - ▶ 6 Hour Incremental Precipitation Tables.
 - ▶ Updated every 30 Minutes.
- Gage Precipitation Totals
 - ▶ 6, 12, 24, 36, and 72 Hour Precipitation Total Tables.
 - ▶ Includes Google Mapped Gage Locations (24 Hour Totals)
 - ▶ Updated every 30 Minutes.
- Historic Records
 - ▶ Historic Data records of all gages owned and operated by the St. Louis District.
 - ▶ Updated as data is officially edited.

| |
|-------------------------------------|
| Water Management Data |
| River and Reservoir Reports |
| River Gage Data, Current Conditions |
| Lock & Dam Gate Report |
| Project Flow Data |
| Mississippi |
| Missouri |
| Illinois |
| Meramec |
| Mississippi Tribs |
| Carlyle |
| Kaskaskia Navigation Project |
| Shelbyville |
| Mark Twain |
| Mark Twain Project DO Data Plots |
| Rend |
| Wappapello |
| Gage Precipitation |
| Gage Precipitation Totals with MAP |
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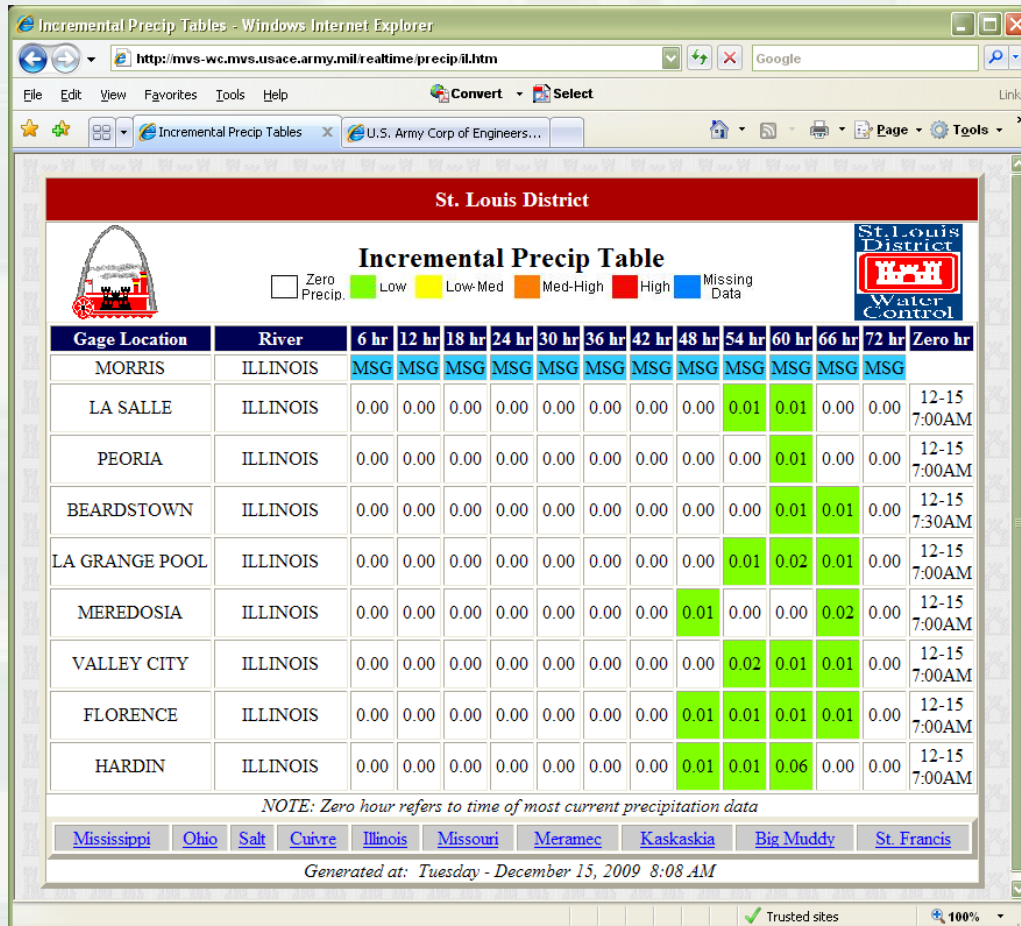
Project Flow Data

- Various Water Level and Flow Plots by project.
- Uses accepted USGS/USACE flow ratings.
- Updated every 30 Minutes.



Plot Navigation

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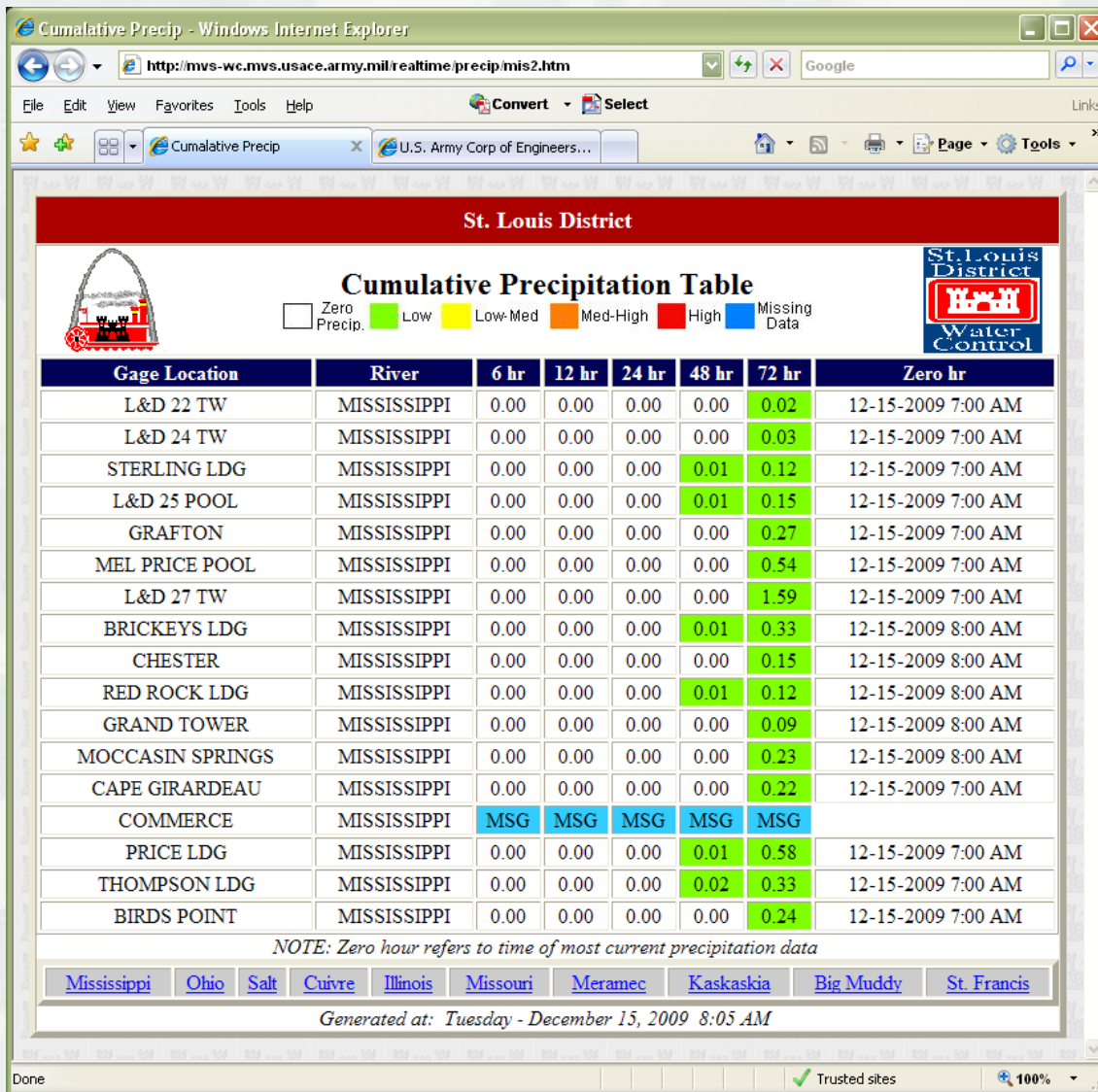
Gage Precipitation

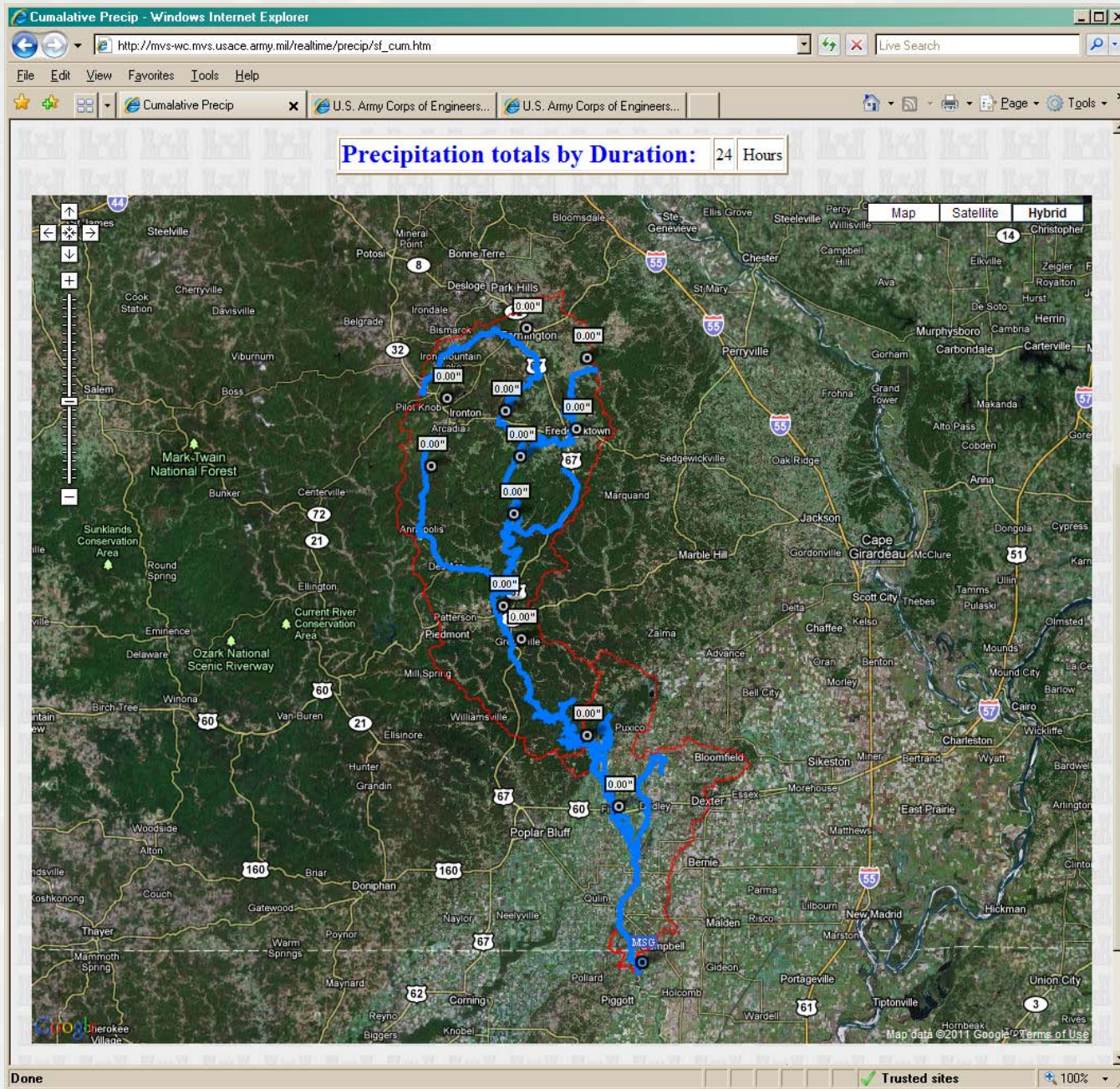
- 6 Hour Incremental Precipitation Tables.
- Updated every 30 Minutes.



Gage Precipitation Totals

- 6, 12, 24, 36, and 72 Hour Precipitation Total Tables.
- Updated every 30 Minutes.





Gage Precipitation Totals

- Map Gages with 24 Hour Totals with Watershed and Stream Segments
- Updated every 30 Minutes.



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Introduction to the Historic Records - Windows Internet Explorer

http://mvs-wc.mvs.usace.army.mil/archiv/archindex.html


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Convert Select

Links

Introduction to the Histor... U.S. Army Corp of Engineers...

NEWSROOM ABOUT US RIVER & RESERVOIR GAGE READINGS CONTACT US KIDS CORNER

 **US Army Corps of Engineers®**
St. Louis District

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| | | | | |
|-------------------|----------------|-----------------|-------------------|------------|
| Mississippi River | Illinois River | Missouri River | Kaskaskia River | Salt River |
| Cuivre River | Meremac River | Big Muddy River | St. Francis River | Ohio River |

INTRODUCTION

This publication is a compilation of the calendar year observed daily river levels, computed daily flow rates, and stream flow measurements of the Mississippi River and its tributaries. Most stations are within the boundaries of the St. Louis Engineer District.

Traditionally, surveyors and mapmakers tried to simplify their task by using the average (or mean) sea level as the definition of zero elevation, because the sea surface is available worldwide. For this reason, the zero surface to which elevations or heights (including river levels) were referred was formerly called "Sea Level Datum of 1929" or "Mean Sea Level (msl)" in this series of reports.

The zero surface currently in use is the National Geodetic Vertical Datum of 1929 (NGVD). This datum was obtained by taking the average sea level over a period of about 19 years at 26 tidegaging stations along the Atlantic, Gulf of Mexico and Pacific Coasts.

Although the datum was derived using average tidal measurements, it is not meant to represent local mean sea level at any specific place or time. In addition, while NGVD represents a standard zero surface in both Canada and the United States, it should not be confused with zero gage datum.

In this publication, both the time of the readings and the zero gage datum of each gage appear directly over the tabulation. Central Standard Time/Daylight Savings Time is used. Stage readings occur daily at 8:00 AM and discharges are mean daily inflow or outflow estimates unless stated otherwise. The station mileages for the Mississippi River are the distances from the mouth or the Ohio. The station mileage for a tributary is generally measured from the mouth of the tributary.

The discharge or flow rate is the quantity of water flowing past a cross section of the stream in a unit of time, and is expressed in cubic feet per second (cfs). The location of the discharge range is given in the footnotes after the tabulation of observed discharges for each station.

DATA FILES AVAILABLE ON THIS SERVER

The files located on this server are organized by their DATREP ID (i.e. storage ID). To illustrate how the files can be downloaded or viewed, first navigate to the through the website until you find the page of interest.

Trusted sites 100%

Historic Data

- Historic Data records of all gages owned and operated by the St. Louis District.
- Updated as data is officially edited.



http://mvs-wc.mvs.usace.army.mil/archive/mi/mi6b/mi6b_1913.pdf - Windows Internet Explorer

http://mvs-wc.mvs.usace.army.mil/archive/mi/mi6b/mi6b_1913.pdf

File Edit Go To Favorites Help Convert Select Links

1 / 1 75.4% Find

1913 Daily Values
MISSISSIPPI - 14 TW (AUGER)

Location: LAT. 38-53-08, LONG. 90-10-54, MILE 302.7 ABOVE THE MOUTH OF THE OHIO RIVER, AT DOWNSTREAM END OF INTERMEDIATE LOCK WALL OF LOCK AND DAM 26.

Gage: LEUPOLD-STEVENS REMOTE REGISTERING WATER LEVEL RECORDER, READ AND MAINTAINED BY THE ST. LOUIS DISTRICT, CORPS OF ENGINEERS.

General Information: DRAINAGE AREA, 171,476 SQUARE MILES; FLOOD STAGE, 417 FEET. A MEAN STAGE OF 405.51 FEET HAS BEEN COMPUTED SINCE THE COMPLETION OF THE CHAIN OF ROCKS LOW-WATER DAM, 1903 TO DATE. MEAN STAGE PRIOR TO THIS CONSTRUCTION, 1908 THRU 1962 WAS 402.31 FEET. COOPERATING AGENCIES, ST. LOUIS DISTRICT, CORPS OF ENGINEERS AND U. S. GEOLOGICAL SURVEY.

Records Available: STAGE, JAN. 1904 TO DATE. STAGES PUBLISHED PRIOR TO 1944 REFER TO BRIDGE GAGE AT SAME SITE (ZERO 313.48 FEET, N.G.V.D.). DEC. 1890 TO SEPT. 1893 AND JAN. 1917 TO DEC. 1919 IN REPORTS OF U. S. WEATHER BUREAU. DISCHARGE, 1913 TO DATE. COMPUTED DAILY SINCE 1890. SINCE OCT. 1927 IN REPORTS OF U. S. GEOLOGICAL SURVEY. NOTE: THE TERMS "TO DATE", "PERIOD OF RECORD", AND "TO PRESENT" REPRESENT DATA THROUGH DEC. 31 OF PREVIOUS YEAR FROM DATE PRINTED.

Mean Level: PERIOD OF RECORD, 405.25 FT.

Extreme Level: PERIOD OF RECORD, DAILY HIGH OF 429.30 FT. ON 09 JUN 1903 & PERIOD OF RECORD, DAILY LOW OF 395.50 FT. ON 31 DEC 1892.

Zero Gage Datum: 0.00 ft. NVD. NOTE: SUBTRACT DATUM FROM ELEVATION TO OBTAIN STAGE.

ALL VALUES RECORDED AT 8 AM. ELEVATION IN FT.

| Day | January | February | March | April | May | June | July | August | September | October | November | December |
|-------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 1 | 399.30 | 402.00 | 401.20 | 415.70 | 410.30 | 409.70 | 406.80 | 403.10 | 400.00 | 399.60 | 400.50 | 400.50 |
| 2 | 399.40 | 401.60 | 400.70 | 415.50 | 409.90 | 409.70 | 406.30 | 402.80 | 400.00 | 399.60 | 400.50 | 400.40 |
| 3 | 399.80 | 401.40 | 400.30 | 415.30 | 409.50 | 409.50 | 405.60 | 402.70 | 400.00 | 399.60 | 400.50 | 400.40 |
| 4 | 400.20 | 401.00 | 400.30 | 415.30 | 409.10 | 409.30 | 405.10 | 402.70 | 400.10 | 399.70 | 400.50 | 400.50 |
| 5 | 400.10 | 400.70 | 400.30 | 415.60 | 408.60 | 409.00 | 404.90 | 402.70 | 400.10 | 399.70 | 400.40 | 400.80 |
| 6 | 399.70 | 400.40 | 400.50 | 416.30 | 408.40 | 408.80 | 404.80 | 402.60 | 400.10 | 399.80 | 400.40 | 400.30 |
| 7 | 400.30 | 400.10 | 400.70 | 416.20 | 408.20 | 408.80 | 404.40 | 402.40 | 400.10 | 399.70 | 400.40 | 400.60 |
| 8 | 398.80 | 399.60 | 400.70 | 415.70 | 408.10 | 408.50 | 404.00 | 402.10 | 400.00 | 399.70 | 400.40 | 400.70 |
| 9 | 398.90 | 399.40 | 400.80 | 416.90 | 408.70 | 408.40 | 403.70 | 401.90 | 400.00 | 399.70 | 400.20 | 401.20 |
| 10 | 398.90 | 398.90 | 401.10 | 418.20 | 409.30 | 408.10 | 403.80 | 402.00 | 400.10 | 399.60 | 400.20 | 401.90 |
| 11 | 399.10 | 398.90 | 401.50 | 418.50 | 409.50 | 407.90 | 403.80 | 402.00 | 400.00 | 400.00 | 400.00 | 402.10 |
| 12 | 398.90 | 399.10 | 402.50 | 418.50 | 409.20 | 408.20 | 403.50 | 401.90 | 400.10 | 400.00 | 400.00 | 402.20 |
| 13 | 398.30 | 398.90 | 404.00 | 418.50 | 408.70 | 408.70 | 403.40 | 401.80 | 400.10 | 399.90 | 400.10 | 401.90 |
| 14 | 397.70 | 398.90 | 405.10 | 418.70 | 408.10 | 408.70 | 403.20 | 401.90 | 400.00 | 400.00 | 400.30 | 401.80 |
| 15 | 397.90 | 399.10 | 406.10 | 418.60 | 407.70 | 408.50 | 403.00 | 401.80 | 399.90 | 400.20 | 401.00 | 401.70 |
| 16 | 398.20 | 399.10 | 406.70 | 418.50 | 407.30 | 408.00 | 403.00 | 401.70 | 399.70 | 400.20 | 402.00 | 401.50 |
| 17 | 399.30 | 399.50 | 407.10 | 418.30 | 407.30 | 407.70 | 403.20 | 401.60 | 399.60 | 400.20 | 402.20 | 401.20 |
| 18 | 401.20 | 400.00 | 407.40 | 418.10 | 407.60 | 407.60 | 403.20 | 401.40 | 399.70 | 400.30 | 401.60 | 400.80 |
| 19 | 401.20 | 400.20 | 408.00 | 417.80 | 408.10 | 406.80 | 403.40 | 401.30 | 399.80 | 400.40 | 400.70 | 400.70 |
| 20 | 400.80 | 400.20 | 408.90 | 417.20 | 408.50 | 406.60 | 403.20 | 401.40 | 399.70 | 400.50 | 400.50 | 400.70 |
| 21 | 401.70 | 400.10 | 409.40 | 416.30 | 409.10 | 406.10 | 403.20 | 401.60 | 399.70 | 400.50 | 400.70 | 400.70 |
| 22 | 401.00 | 400.10 | 409.90 | 415.40 | 409.20 | 406.00 | 403.40 | 401.70 | 399.70 | 400.50 | 400.30 | 400.60 |
| 23 | 400.60 | 401.80 | 410.40 | 414.80 | 408.70 | 406.20 | 403.40 | 401.60 | 399.70 | 400.90 | 400.00 | 400.40 |
| 24 | 402.00 | 402.70 | 411.10 | 414.30 | 408.10 | 405.80 | 403.50 | 401.60 | 399.60 | 400.90 | 399.80 | 400.40 |
| 25 | 403.50 | 401.80 | 413.40 | 413.80 | 408.10 | 405.70 | 403.40 | 401.70 | 399.60 | 400.70 | 400.10 | 400.30 |
| 26 | 403.20 | 401.00 | 416.60 | 413.20 | 408.70 | 405.90 | 403.60 | 401.60 | 399.60 | 400.50 | 400.30 | 400.30 |
| 27 | 403.10 | 400.70 | 417.70 | 412.70 | 409.30 | 406.40 | 403.60 | 401.40 | 399.50 | 400.50 | 400.30 | 399.90 |
| 28 | 402.10 | 400.90 | 417.50 | 411.90 | 409.70 | 406.50 | 403.60 | 401.10 | 399.60 | 400.80 | 400.30 | 399.80 |
| 29 | 402.30 | --- | 417.00 | 411.30 | 409.70 | 406.70 | 403.60 | 400.70 | 399.90 | 400.70 | 400.30 | 399.50 |
| 30 | 402.00 | --- | 416.50 | 410.80 | 409.70 | 407.00 | 403.60 | 400.40 | 399.70 | 400.70 | 400.30 | 399.50 |
| 31 | 402.00 | --- | 416.00 | --- | 409.70 | --- | 403.40 | 400.10 | --- | 400.50 | --- | --- |
| Mean | 400.37 | 400.29 | 407.08 | 415.93 | 408.78 | 407.69 | 403.89 | 401.78 | 399.86 | 400.17 | 400.49 | 400.78 |

Done Unknown Zone

Historic Data

- Records available in PDF format



BUILDING STRONG®

Historic Data Mining - Step 1

Introduction to the Historic Records - Windows Internet Explorer

http://mvs-wc.mvs.usace.army.mil/archive/archindex.html

File Edit View Favorites Tools Help

Convert Select

Introduction to the Histor... U.S. Army Corp of Engineers...

DATA FILES AVAILABLE ON THIS SERVER

The files located on this server are organized by their DATREP ID (i.e. storage ID). To illustrate how the files can be downloaded or viewed, first navigate to the through the website until you find the gage of interest.

For example lets assume we are looking for the St. Louis gage records for the year 1984.

1. St. Louis gage record information is located in the Mississippi River Basin:

Introduction to the Historic Records - Microsoft Internet Explorer provided by CEMYS

File Edit View Favorites Tools Help

Back Forward Stop Search Favorites

Address http://mvs-wc.mvs.usace.army.mil/archive/archindex.html

Google Search 21 blocked ABC Check AutoLink AutoFill Options

NEWSROOM ABOUT US RIVER & RESERVOIR GAGE READINGS CONTACT US KIDS CORNER

US Army Corps of Engineers® St. Louis District

RELEVANT READY RESPONSIVE RELIABLE Proudly serving the Armed Forces and the Nation now and in the future.

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» Permits/Regulatory » Lakes/Recreation » Contracting » Public Affairs » Water Control

| | | | | |
|-------------------|----------------|-----------------|-------------------|------------|
| Mississippi River | Illinois River | Missouri River | Kaskaskia River | Salt River |
| Cuivre River | Meremac River | Big Muddy River | St. Francis River | Ohio River |

INTRODUCTION

This publication is a compilation of the calendar year observed daily river levels, computed daily flow rates, and stream flow measurements of the Mississippi River and its tributaries. Most stations are within the boundaries of the St. Louis Engineer District.

Traditionally, engineers and managers used to simplify their work by using the average (or mean) sea level as the definition of mean elevation. Because this sea surface is available worldwide, the sea mean

Internet

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Historic Data Mining - Step 2

Introduction to the Historic Records - Windows Internet Explorer

http://mvs-wc.mvs.usace.army.mil/archive/archindex.html

File Edit View Favorites Tools Help

Convert Select

2. Select the St. Louis - Mississippi link. NOTE - the Datrep ID for the St. Louis gage is MISL:

Historic Data for MI - Microsoft Internet Explorer provided by CEMVS

File Edit View Favorites Tools Help

Back Forward Stop Reload Home Search Favorites

Address http://mvs-wc.mvs.usace.army.mil/archive/mi.html

Google Search 21 blocked Check AutoLink AutoFill Options

Cuivre River Meremac River Big Muddy River St. Francis River Ohio River

Mississippi River Basin - Historic Data

| Location | Datrep ID | Type | River Mile | Gage Zero | Flood Level |
|---|-----------|-------|------------|-----------|-------------|
| L&D 22 TW - MISSISSIPPI | MI2Q | FLOW | 301.20 | - | - |
| L&D 22 TW - MISSISSIPPI | MI2T | STAGE | 301.20 | 446.10 | 16.00 |
| MOSIER LANDING - MISSISSIPPI | MIML | ELEV | 260.30 | 400.00 | 441.00 |
| MUNDYS LANDING (GAGE READER) - MISSISSIPPI | MIMU | STAGE | 293.00 | 441.85 | 14.00 |
| LOUISIANA - MISSISSIPPI | MILO | STAGE | 282.90 | 437.33 | 15.00 |
| 24 POOL - MISSISSIPPI | MI4P | ELEV | 273.50 | 421.81 | - |
| 24 TW - MISSISSIPPI | MI4T | ELEV | 273.20 | 421.81 | 25.00 |
| RIP RAP LANDING (GAGE READER) - MISSISSIPPI | MIRI | STAGE | 265.00 | 426.03 | 17.00 |
| STERLING LDG - MISSISSIPPI | MIST | ELEV | 250.80 | 420.48 | - |
| 25 POOL - MISSISSIPPI | MI5P | ELEV | 200.50 | 407.00 | - |
| 25 TW - MISSISSIPPI | MI5T | ELEV | 241.20 | 407.00 | 433.00 |
| DIXON LANDING (GAGE READER) - MISSISSIPPI | MIDL | STAGE | 228.30 | 410.62 | 16.00 |
| GRAFTON - MISSISSIPPI | MIGR | STAGE | 218.60 | 403.79 | 18.00 |
| ALTON - MISSISSIPPI | MIAL | ELEV | 203.00 | 400.00 | - |
| 26 TW - MISSISSIPPI | MI6B | ELEV | - | - | - |
| 26 POOL - MISSISSIPPI | MI6A | ELEV | - | - | - |
| MEL PRICE POOL - MISSISSIPPI | MI6P | ELEV | 201.10 | 395.48 | - |
| MEL PRICE TW - MISSISSIPPI | MI6T | ELEV | 200.50 | 395.48 | 21.00 |
| HARTFORD - MISSISSIPPI | MIHA | ELEV | 196.80 | 350.00 | 67.00 |
| CHAIN OF ROCKS (GAGE READER) - MISSISSIPPI | MICR | STAGE | 190.40 | 313.91 | 101.00 |
| 27 POOL - MISSISSIPPI | MI7P | ELEV | 185.30 | 350.00 | - |
| 27 TW - MISSISSIPPI | MI7T | ELEV | 185.10 | 350.00 | - |
| ST. LOUIS - MISSISSIPPI | MISL | STAGE | 179.60 | 379.94 | 30.00 |
| ENGINEERS DEPOT (GAGE READER) - MISSISSIPPI | MIED | STAGE | 176.00 | 370.50 | 20.00 |

http://mvs-wc.mvs.usace.army.mil/archive/mi/misl/

Internet

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BUILDING STRONG®

Historic Data Mining - Step 3

Introduction to the Historic Records - Windows Internet Explorer

Address: <http://mvs-wc.mvs.usace.army.mil/archive/archindex.html>

3. Recalling from the previous screen that the datrep ID is MISL, Search for MISL_1984.pdf (datrep ID yyyy.pdf). Once the file is located, right click on the file and choose to Save Target As... (or Save As... using Netscape) to download file to your computer:

Index of /archive/mi/misl - Microsoft Internet Explorer provided by CEMVS

Address: <http://mvs-wc.mvs.usace.army.mil/archive/mi/misl/>

| File | Date | Time | Size |
|-------------------------------|-------------|-------|------|
| misl_1964.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1965.pdf | 23-Mar-2006 | 07:12 | 61k |
| misl_1966.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1967.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1968.pdf | 23-Mar-2006 | 07:12 | 61k |
| misl_1969.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1970.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1971.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1972.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1973.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1974.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1975.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1976.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1977.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1978.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1979.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1980.pdf | 23-Mar-2006 | 07:12 | 61k |
| misl_1981.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1982.pdf | 23-Mar-2006 | 07:12 | 61k |
| misl_1983.pdf | 23-Mar-2006 | 07:12 | 61k |
| misl_1984.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1985.pdf | 23-Mar-2006 | 07:12 | 61k |
| misl_1986.pdf | 23-Mar-2006 | 07:12 | 61k |
| misl_1987.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1988.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1989.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1990.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1991.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1992.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1993.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1994.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1995.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1996.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1997.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1998.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_1999.pdf | 23-Mar-2006 | 07:12 | 60k |
| misl_2000.pdf | 23-Mar-2006 | 07:12 | 60k |

Right-click context menu for [misl_1984.pdf](#):

- Open
- Open in New Window
- Save Target As...
- Print Target
- Cut
- Copy
- Copy Shortcut
- Paste
- Add to Favorites...



BUILDING STRONG®

Weather Information

- Radar
 - ▶ Link to National Mosaic NWS Radar – Loop Option
 - ▶ Link to Local Radar – Loop Option – Intellicast
 - ▶ Link to Local Radar – Loop Option – St. Louis NWS WFO
- Weather Channel Weekly Planner
 - ▶ Precipitation/snow forecast for the next 10 days
- NWS St. Louis Weather Forecast Office (WFO)
- Quantitative Precipitation Forecast (QPF)
 - ▶ Future Quantitative Precipitation estimates for the next 3 to 5 days or 5 day total.

| |
|---|
| Water Management Data |
| Weather Information |
| Radar |
| National Radar Loop - NWS |
| Local Radar Loop - Intellicast |
| Local Radar Loop - NWS St. Louis |
| Weather Channel Weekly Planner |
| NWS - St. Louis (WFO) |
| Quantitative Precipitation Forecast (QPF) |
| Day 1 |
| Day 2 |
| Day 3 |
| Day 4-5 |
| 5 Day Total |
| Navigation Information |
| Flood Frequency Study Profiles |
| Enviromental Management Resources |
| Research and Study Results |
| Links of Interest |
| St. Louis District Homepage |



Navigation Information

- Navigation Notices/ITCS Memos
 - ▶ Coast Guard/USACE Notices
 - ▶ Memos from RIAC with respect to Navigation
 - ▶ Information posted by the River Industry Bulletin Board which is a product of the River Industry Action Committee (RIAC)
 - Website <http://www.ribb.com>
- OMNI Lockage System
 - ▶ Upper Mississippi River Navigation Information
 - Includes Vessel Queuing and Lockage information

| |
|--|
| Water Management Data |
| Weather Information |
| Navigation Information |
| River Industry Bulletin Board |
| Navigation Notices |
| ITCS Memos |
| Navigation Home |
| OMNI Lockage System - Navigation Information |
| Flood Frequency Study Profiles |
| Environmental Management Resources |
| Research and Study Results |
| Links of Interest |
| St. Louis District Homepage |



Flood Frequency Study Profiles

- Flood Flow Frequency Analysis – January, 2004
 - ▶ Study produced flood flow frequency profiles.
 - ▶ Links to:
 - Flow/Stage Calculator and Profiles
 - Flood Frequency study homepage
 - Flow Frequency final report

| |
|--|
| Water Management Data |
| Weather Information |
| Navigation Information |
| Flood Frequency Study Profiles |
| Flow/Stage Frequency Calculator |
| Flood Frequency Study Homepage |
| Flow Frequency Study Final Report |
| Enviromantal Management Resources |
| Research and Study Results |
| Links of Interest |
| St. Louis District Homepage |



Flow Frequency Calculator And Frequency Profile Plots

Flow Frequency Query - Windows Internet Explorer

http://www7.arsa.army.mil/flow_freq/flow_freq.cfm?v=1

File Edit View Favorites Tools Help

Convert Select

Flow Frequency Query U.S. Army Corp of Engineers...

Flow Frequency Query

Flow Frequency Query
Upper Mississippi River
United States Army Corps of Engineers
Mississippi Valley Division
Developed by Rock Island District

[\[Disclaimers\]](#) [\[Help\]](#)

River:
 Mississippi River

Datum:
 1920

Return Period:
 100-year

River Mile:
 145

Flow: 910.000 CFS (Interpolated)
 Surface Elevation: 430.8 Ft (Interpolated)

[River Mile selection](#)

Or Select a River Reach
 Select a PDF Plate of Pool

Flow, Reach, and Date are only available for the photos for the Mississippi and Illinois Rivers. All downloadable PDF Plates are above 4000 ft

[Data sources](#)

River Locations of Interest

Mississippi River

| Location | River Mile |
|----------------------|------------|
| St. Paul, MN | 829.3 |
| Peasport, WI | 811.4 |
| Red Wing, MN | 791.0 |
| Winona, MN | 771.1 |
| IA-MN State Boundary | 471.8 |
| Ottumberg, IA | 611.0 |
| Dubuque, IA | 579.9 |
| Clinton, IA | 518.0 |
| Quad Cities, IA, IL | 488.2 |
| New Boston, IL | 471.1 |
| Moline, IL | 450.2 |
| Keosauqua, IA | 364.1 |
| Quincy, IL | 327.1 |
| Clarksville, MO | 271.2 |
| Illinois River | 218.0 |
| Alton, IL | 203.0 |
| Hannibal, MO | 171.1 |
| St. Louis, MO | 139.6 |
| Hannibal, MO | 139.6 |
| Chester, IL | 100.9 |
| Cape Girardeau, MO | 52.1 |
| Ohio River | 0.0 |

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http://www2.mvr.usace.army.mil/low_freq/low_freq_data_disp.cfm?fid=77966...

http://www2.mvr.usace.army.mil/low_freq/low_freq_data_disp.cfm?fid=77966... Google

File Edit View Favorites Tools Help

Convert Select

http://www2.mvr.usace.army.mil/low_freq/low_freq_data_disp.cfm?fid=77966... U.S. Army Corp of ...

Page Tools

Flow Frequency Data Display

[Back](#) [View Frequency Model](#)

Location: St Louis, MO
 Basin: Mississippi River
 River Mile: 179.60
 Datum: 1929
 District: USACE-MVS

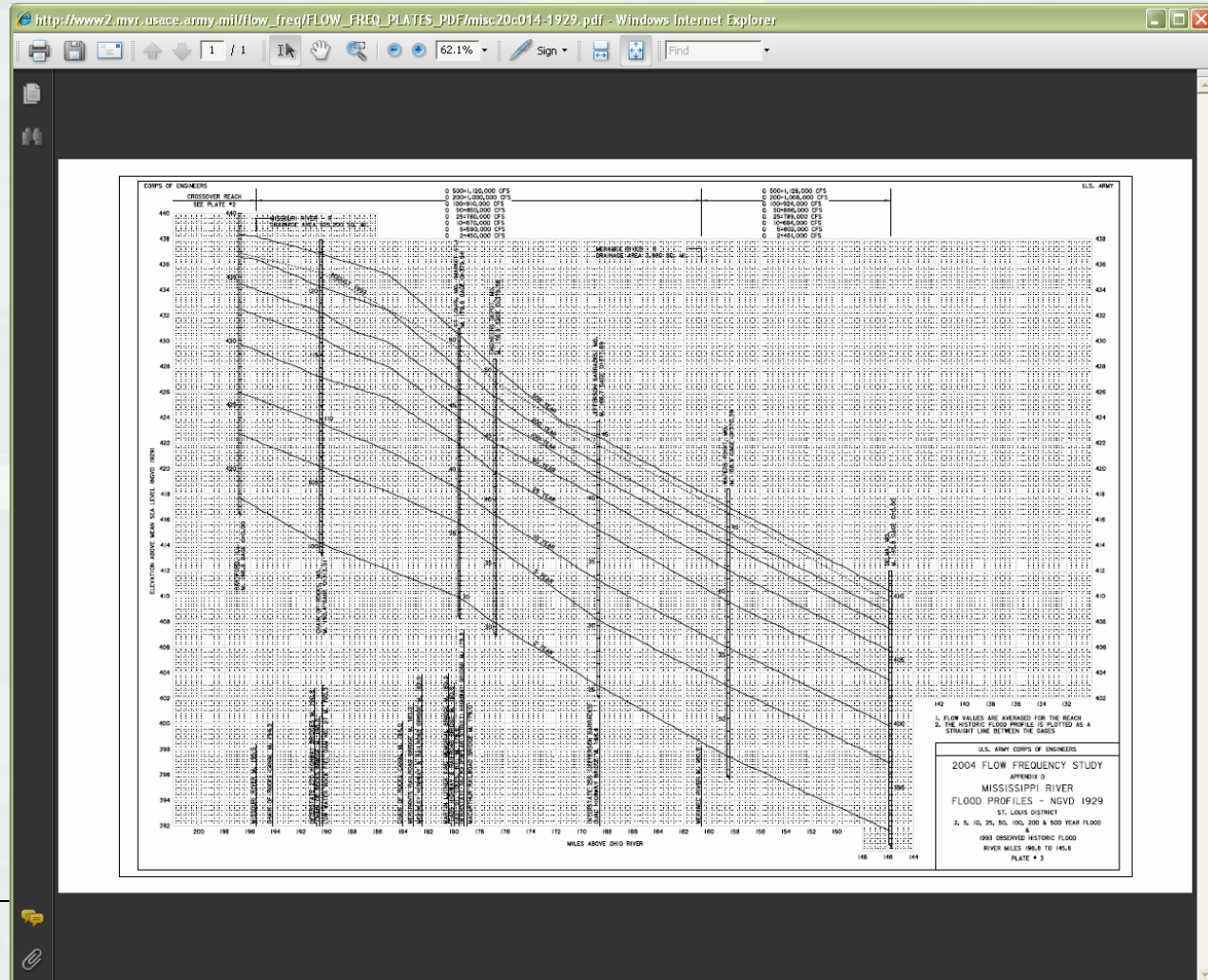
* Download unprocessed data

| Exceedance Probability | Stage (ft) | Surface Elevation (ft) | Flow (cfs) |
|------------------------|------------|------------------------|------------|
| 2-year | 29.96 | 429.90 | 450000 |
| 5-year | 29.96 | 429.90 | 450000 |
| 5-year | 31.76 | 431.70 | 590000 |
| 5-year | 31.76 | 431.70 | 590000 |
| 10-year | 31.46 | 431.40 | 670000 |
| 10-year | 31.46 | 431.40 | 670000 |
| 25-year | 41.96 | 421.90 | 780000 |
| 50-year | 44.06 | 424.00 | 850000 |
| 50-year | 44.06 | 424.00 | 850000 |
| 100-year | 46.06 | 426.00 | 910000 |
| 100-year | 46.06 | 426.00 | 910000 |
| 200-year | 47.86 | 427.80 | 1000000 |
| 200-year | 47.86 | 427.80 | 1000000 |
| 500-year | 50.56 | 430.50 | 1120000 |
| 500-year | 50.56 | 430.50 | 1120000 |

Done

Trusted sites

100%

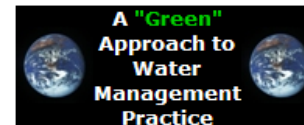


Environmental Management Resources

- Environmental Pool Management
 - ▶ Details status of the L&D management program
 - Plots for drawdown targets for each of the St. Louis District Operated Mississippi River Lock and Dams.
- Fish Spawn Information
 - ▶ Documentation of the St. Louis Districts contribution to the Spring Fish Spawn at the reservoir projects.



Environmental Stewardship



Environmental Pool Management

- Details status of the L&D management program
 - Plots for drawdown targets for each of the St. Louis District Operated Mississippi River Lock and Dams.

Environmental Pool Management - Windows Internet Explorer

http://mvs-wc.mvs.usace.army.mil/epm/epmindex.html

File Edit View Favorites Tools Help

Convert Select

Environmental Pool Management

St. Louis District -- Water Control Management

Environmental Pool Management (EPM) implemented in 1994 attempts to create thousands of acres of critical wetland vegetation in the navigation pools, while still maintaining a safe and dependable navigation channel. A successful environmental pool management year is to keep the already drawn down pools (due to high flows), continued drawn down 0.5 to 2.0 feet for at least 30 days. This pool drawdown occurs between May and August, with the May-June period being the most desirable for vegetation growth and seed production. It should be noted that maximum drawdown (4-6 feet) at the pools are not related to EPM. These drawdowns are done to reduce the flooding upstream of the project. After the gates are placed in the water, the pool is raised. Typically, the pools are raised as quickly as possible until the drawdown target is achieved. These drawdown targets are usually:

- 0.5-1.0 Feet @ L&D #24
- 1.0-2.0 Feet @ L&D #25
- 0.5-1.0 Feet @ MP L&D


Drawdown targets greater than these are not attempted due to the possible negative recreational impacts.

The St. Louis District originally developed Environmental Pool Management, and applied this method of regulation at Lock and Dam 24 (River Mile 273), Lock and Dam 25 (River Mile 241), and Melvin Price Lock and Dam (River Mile 201). Graphs of the daily pool elevations are available here, with drawdown depths indicated. Click on the pictures for information from the current year, or select a previous year.

NOTE: Previous years will be added when data are summarized. Data for future years will be added each year during Environmental Pool Management.

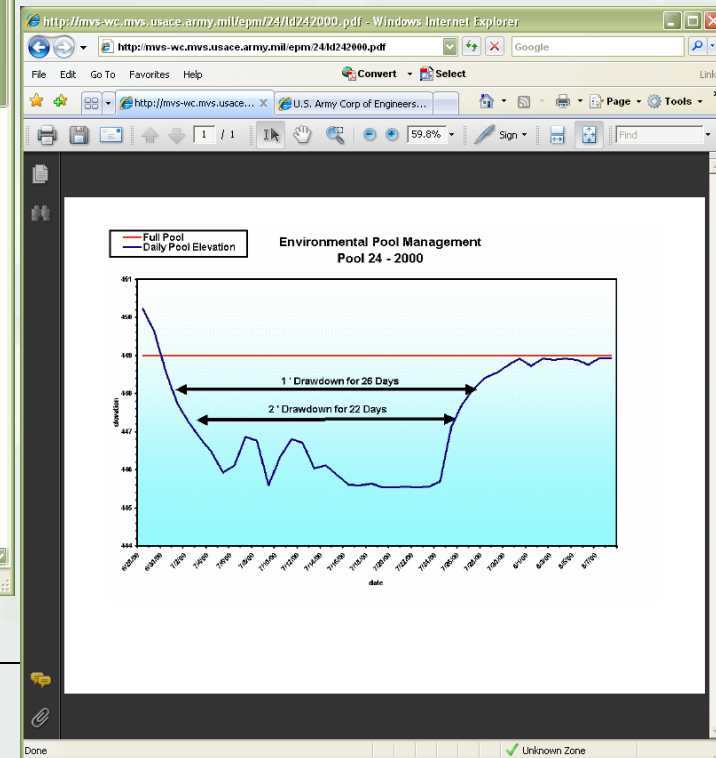
[View the EPM Final Report for 2003](#)

[2001 Environmental Pool Management Pictures](#)



Lock and Dam 24; Clarksville, MO

- [L&D 24, 2008 Environmental Pool Management](#)
- [L&D 24, 2007 Environmental Pool Management](#)
- [L&D 24, 2006 Environmental Pool Management](#)
- [L&D 24, 2005 Environmental Pool Management](#)
- [L&D 24, 2004 Environmental Pool Management](#)
- [L&D 24, 2003 Environmental Pool Management](#)
- [L&D 24, 2002 Environmental Pool Management](#)
- [L&D 24, 2001 Environmental Pool Management](#)
- [L&D 24, 2000 Environmental Pool Management](#)
- [L&D 24, 1999 Environmental Pool Management](#)
- [L&D 24, 1998 Environmental Pool Management](#)
- [L&D 24, 1997 Environmental Pool Management](#)
- [L&D 24, 1996 Environmental Pool Management](#)
- [L&D 24, 1995 Environmental Pool Management](#)
- [L&D 24, 1994 Environmental Pool Management](#)



Fish Spawn Information

- Documentation of the St. Louis Districts contribution to the Spring Fish Spawn at the reservoir projects.



Fish Spawn Information - Windows Internet Explorer

http://mvs-wc.mvs.usace.army.mil/fish/fishindex.html




File Edit View Favorites Tools Help

Convert Select

Fish Spawn Information U.S. Army Corp of Engineers...


 Fish Spawn Information 

st. Louis District -- Water control Management

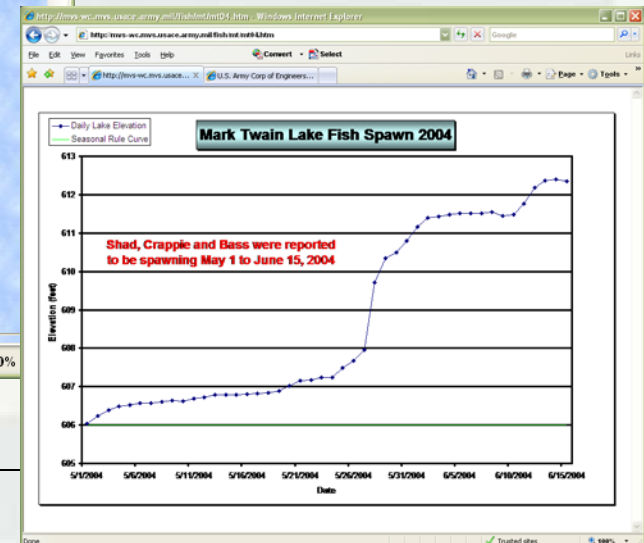
This page documents the contribution of the Army Corps of Engineers to the Spring Fish Spawn. In cooperation with other responsible agencies, the Corps seeks to maintain steady pool elevations which enhance the quality of spawning. Information is available for Mark Twain Lake, Carlyle Lake, and Lake Shelbyville. Graphs of the pool elevation are shown for available years.

(Click on pictures for lake information, or select a year for fish spawn information.)



Mark Twain Lake, Missouri

[Mark Twain Lake - 2008 Fish Spawn](#)
[Mark Twain Lake - 2007 Fish Spawn](#)
[Mark Twain Lake - 2006 Fish Spawn](#)
[Mark Twain Lake - 2005 Fish Spawn](#)
[Mark Twain Lake - 2004 Fish Spawn](#)
[Mark Twain Lake - 2003 Fish Spawn](#)
[Mark Twain Lake - 2002 Fish Spawn](#)
[Mark Twain Lake - 2001 Fish Spawn](#)
[Mark Twain Lake - 2000 Fish Spawn](#)
[Mark Twain Lake - 1999 Fish Spawn](#)
[Mark Twain Lake - 1998 Fish Spawn](#)
[Mark Twain Lake - 1997 Fish Spawn](#)
[Mark Twain Lake - 1996 Fish Spawn](#)
[Mark Twain Lake - 1995 Fish Spawn](#)
[Mark Twain Lake - 1994 Fish Spawn](#)



Research and Study Results

- Various research documents, feasibility, and case studies.

Water Management Data
Weather Information
Navigation Information
Flood Frequency Study Profiles
Environmental Management Resources
Research and Study Results

Water Control Data System Backup/Oracle Database Backup and Recovery
St. Louis District Transition to an Oracle Based Data System (Corps Water Management System, CWMS)
Perception and Reality Concerning the 1993 Mississippi River Flood: An Engineers' Perspective
Protecting Society From Flood Damage: A Case Study from the 1993 Upper Mississippi River Flood
Geomorphology Study of the Middle Mississippi River
Environmental Pool Management on the Upper Mississippi River
Thompson Bend Riparian Corridor Project

Kaskaskia River
1992 Environmental Assessment of Kaskaskia
1993 FONSI Determination for Temporary Deviation
Sept 2004 Environmental Assessment and FONSI

Links of Interest

St. Louis District Homepage



Links of Interest

- Links to external government agencies.
- Links to other Hydraulics/Geospatial St. Louis District and USACE offices.

| |
|---|
| Water Management Data |
| Weather Information |
| Navigation Information |
| Flood Frequency Study Profiles |
| Enviromantal Management Resources |
| Research and Study Results |
| Links of Interest |
| Applied River Engineering Center |
| Technical Center of Expertise-Photogrammetric Mapping |
| US Army Corps of Engineers |
| US Geological Survey |
| USGS Illinois Water Resources |
| USGS Missouri Water Resources |
| Department of Conservation |
| Missouri Department of Conservation |
| Illinois Department of Natural Resources |
| National Oceanic Atmospheric Administration (NOAA) |
| St. Louis District Homepage |



Water Management Operational Information



BUILDING STRONG®

Lock and Dam Pool Management

- The pools in the St. Louis District are maintained based upon their hinge point limits.
- As the flows **increase** and the upper limits of the hinge point is approached, the pool level is lowered to compensate until the flows start **decreasing** or maximum drawdown is reached.
- As the flows **decrease** and the lower limits of the hinge point is approached, the pool level is raised to compensate until the flows start **increasing**.



Lock and Dam Pool Management

- The limits at the hinge points are defined based upon:
 1. Navigational needs
 2. Authorized U.S. Government easements
- The lower limit at the hinge points are defined by the lowest river level allowable for a safe and dependable navigational channel.
- The upper limit is defined by the highest river level that can be maintained by the dam. This is because the land above this limit is not owned by the U.S. Government, thus not authorized to be inundated by the project.



Lock and Dam

Hinge Point
Control Operation

Low
Flow



Hinge Point

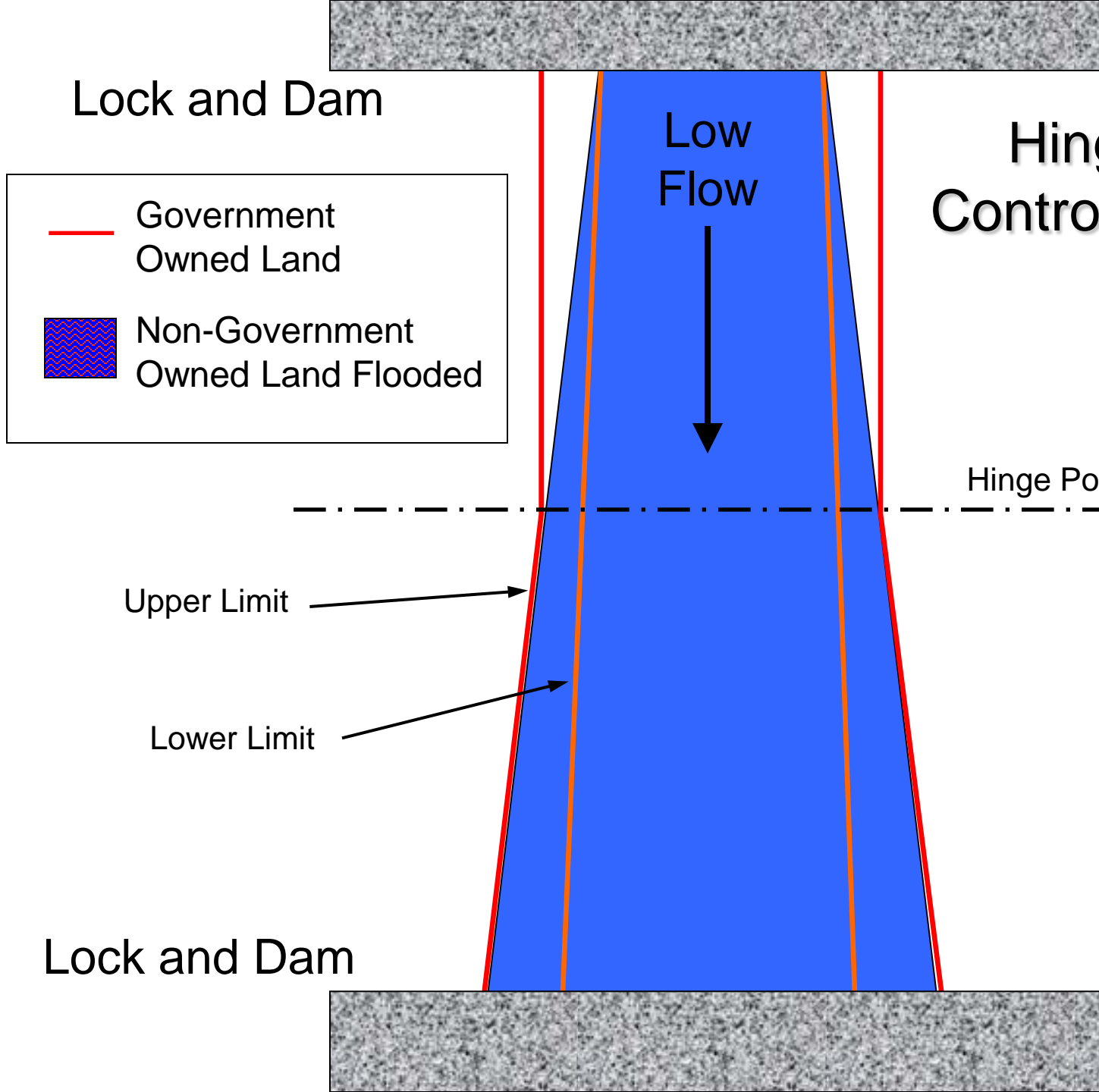
Upper Limit

Lower Limit

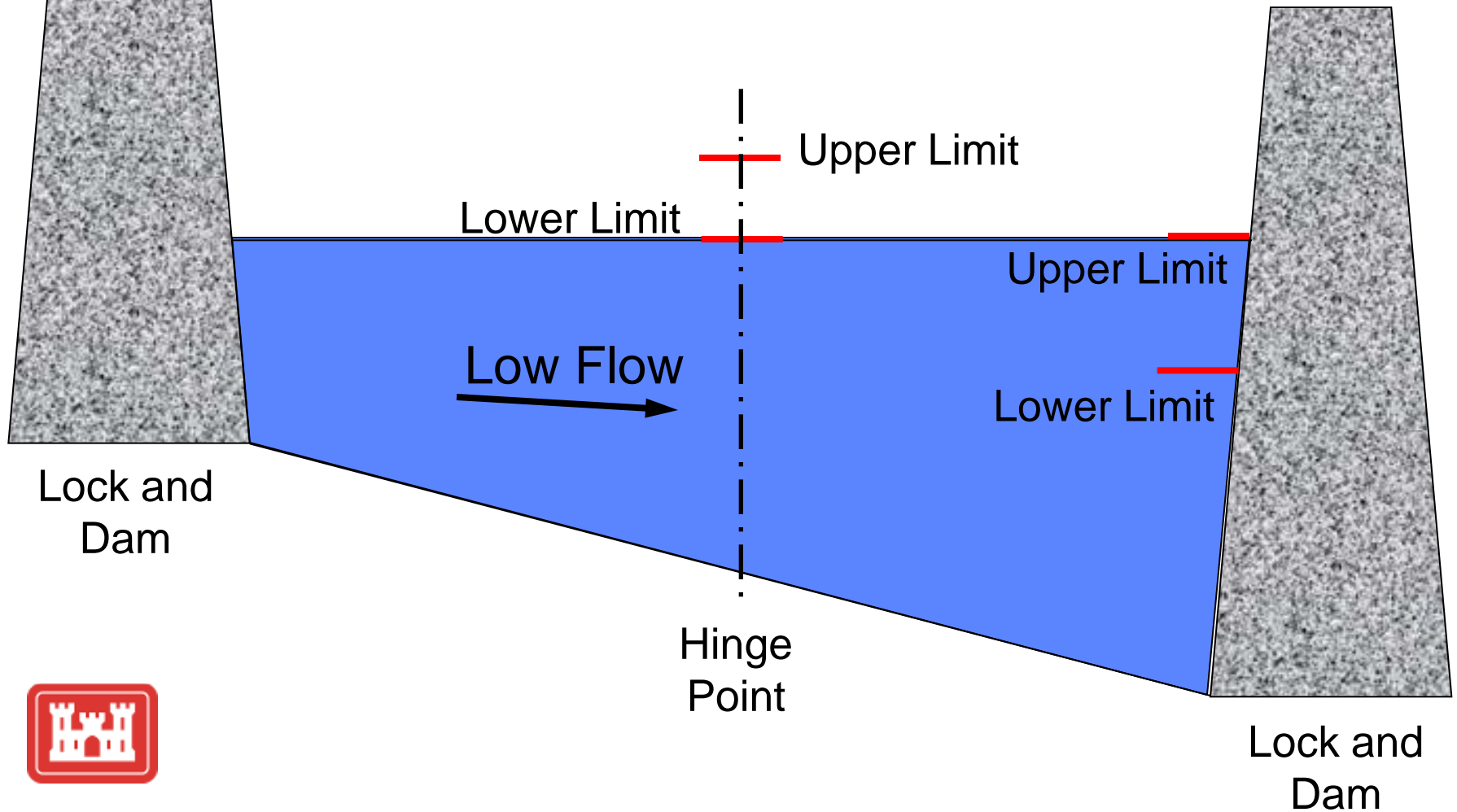
Lock and Dam

Government
Owned Land

Non-Government
Owned Land Flooded



Hinge Point Control Operation



Lock and Dam

Hinge Point
Control Operation

- Government Owned Land
- Non-Government Owned Land Flooded

High Flow

Hinge Point

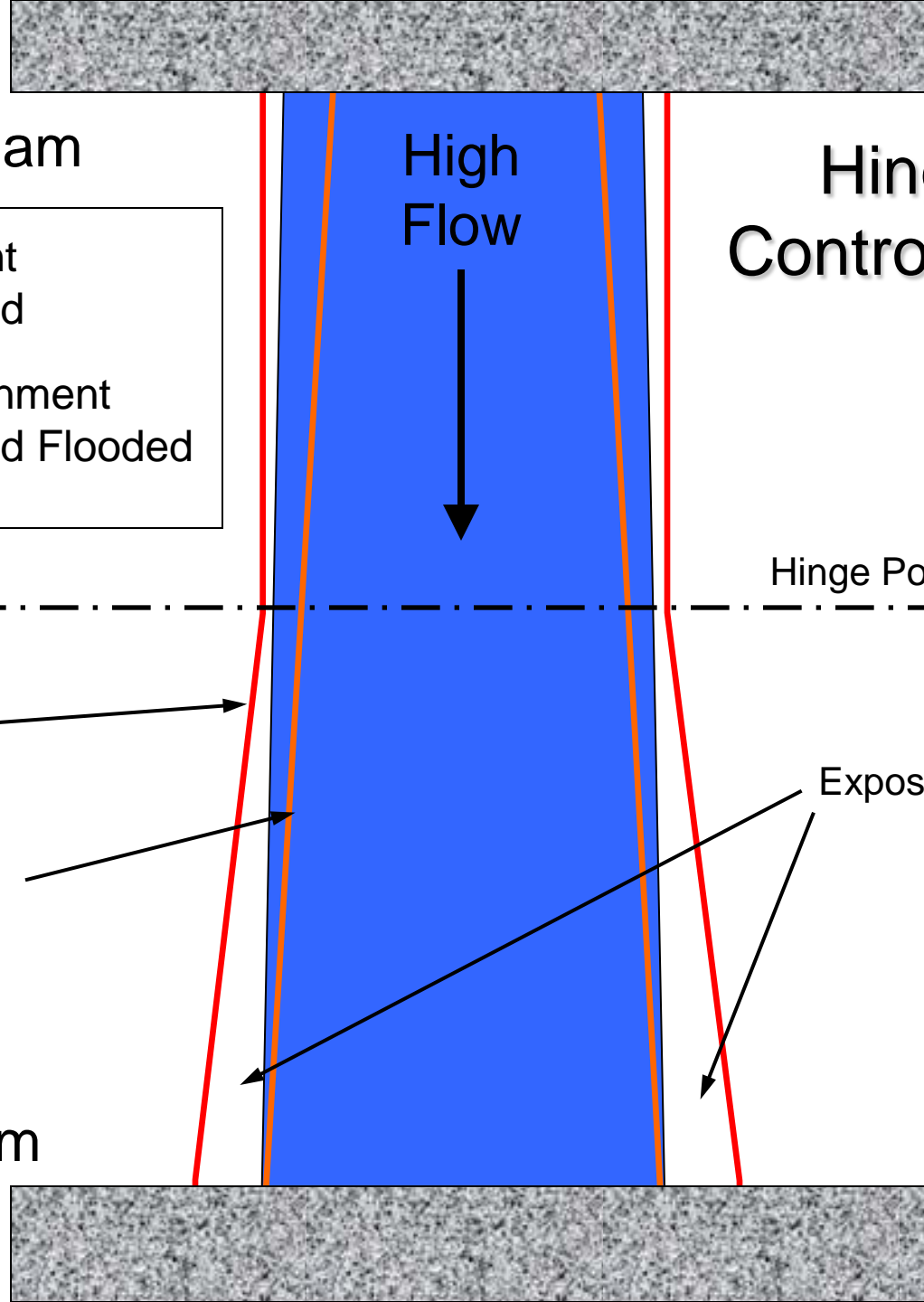
Upper Limit

Lower Limit

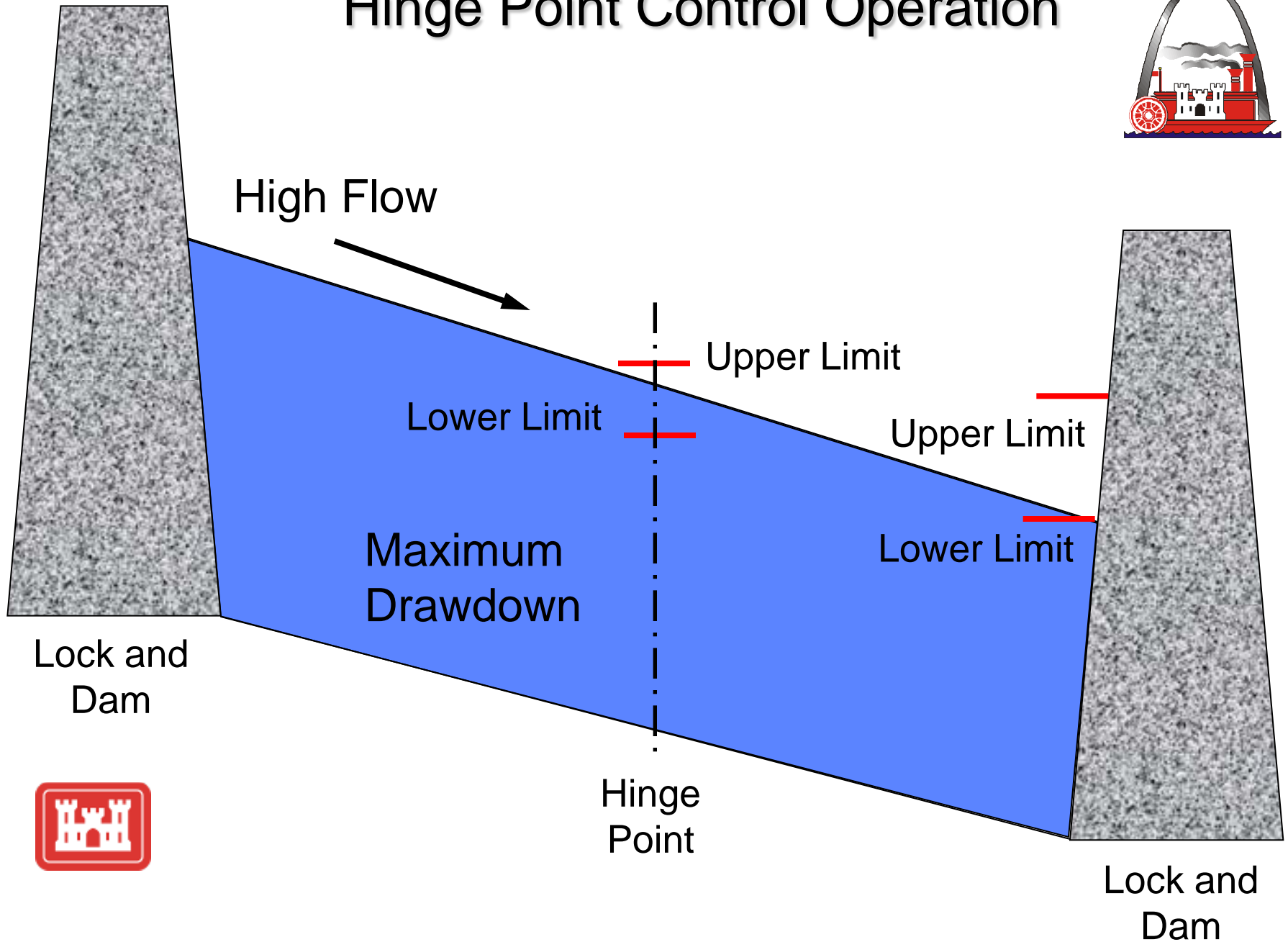
Exposed Areas

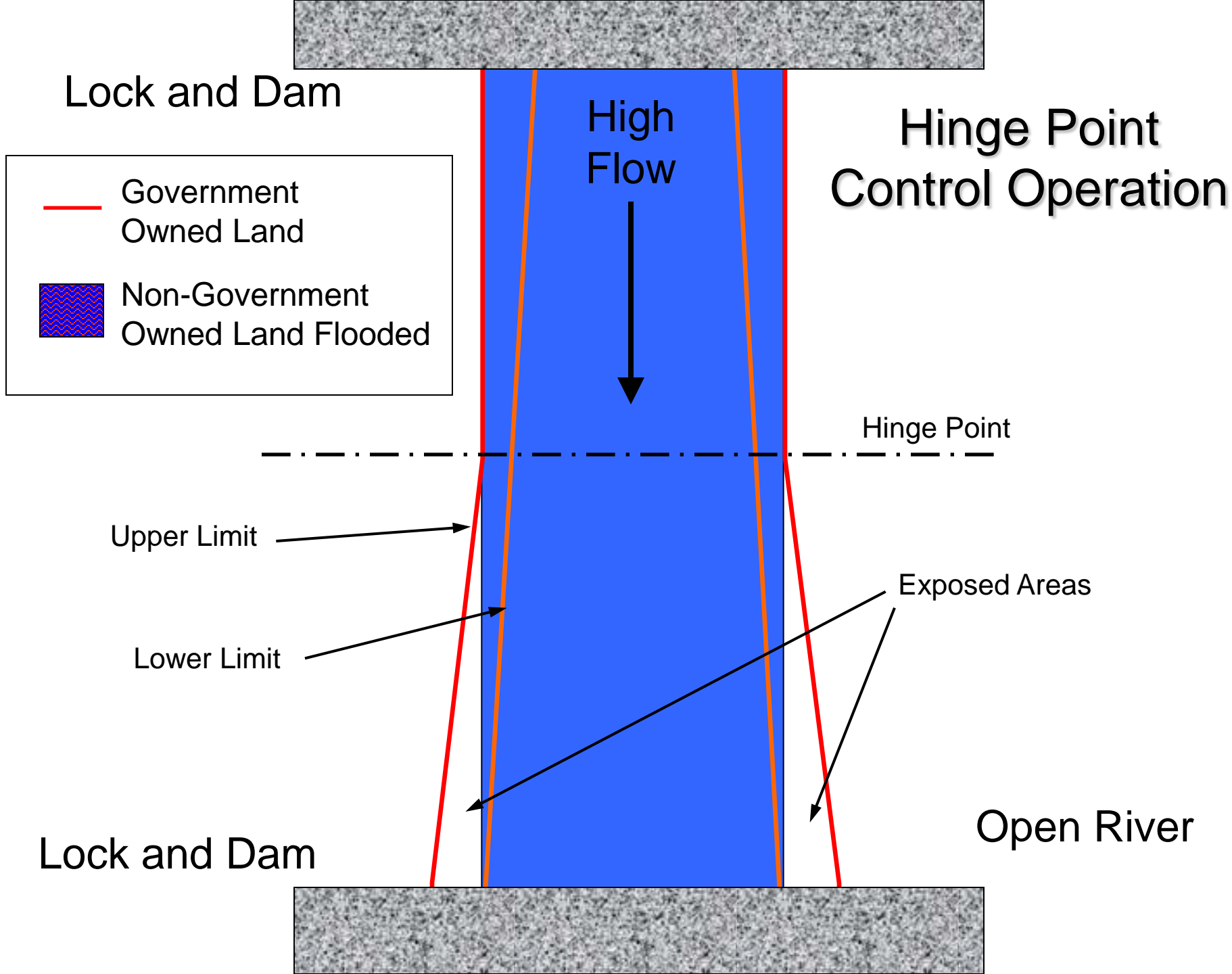
Lock and Dam

Maximum
Drawdown

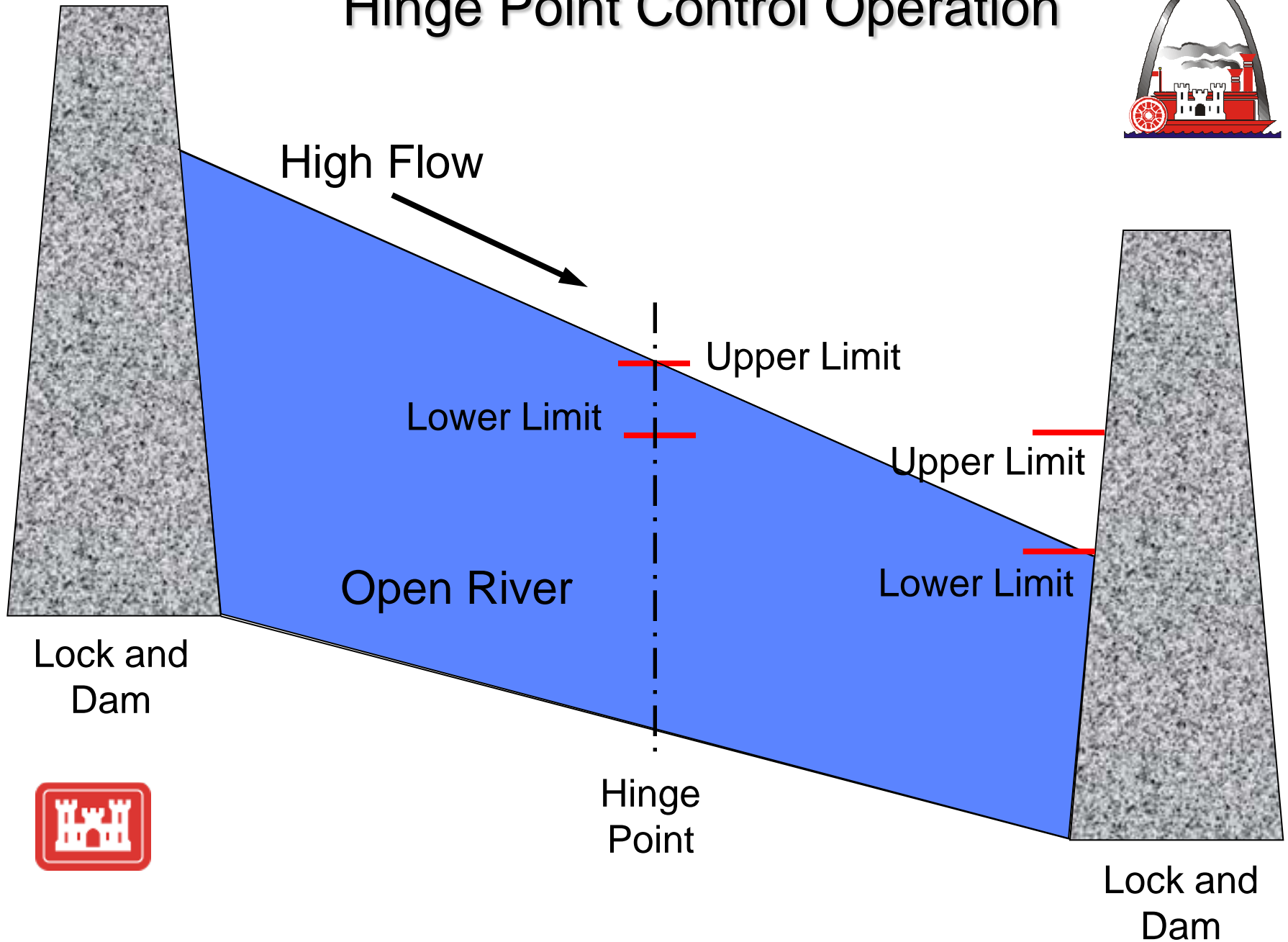


Hinge Point Control Operation

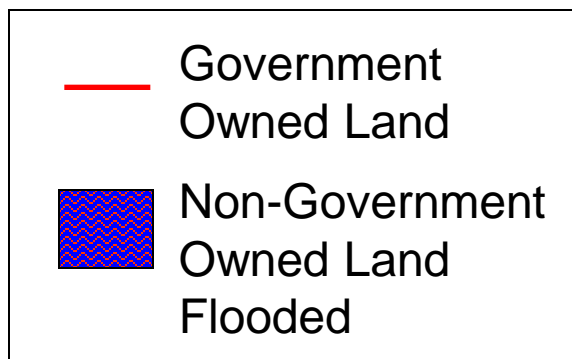




Hinge Point Control Operation



Lock and Dam



Extremely High Flow



Hinge Point Control Operation

Hinge Point

Upper Limit



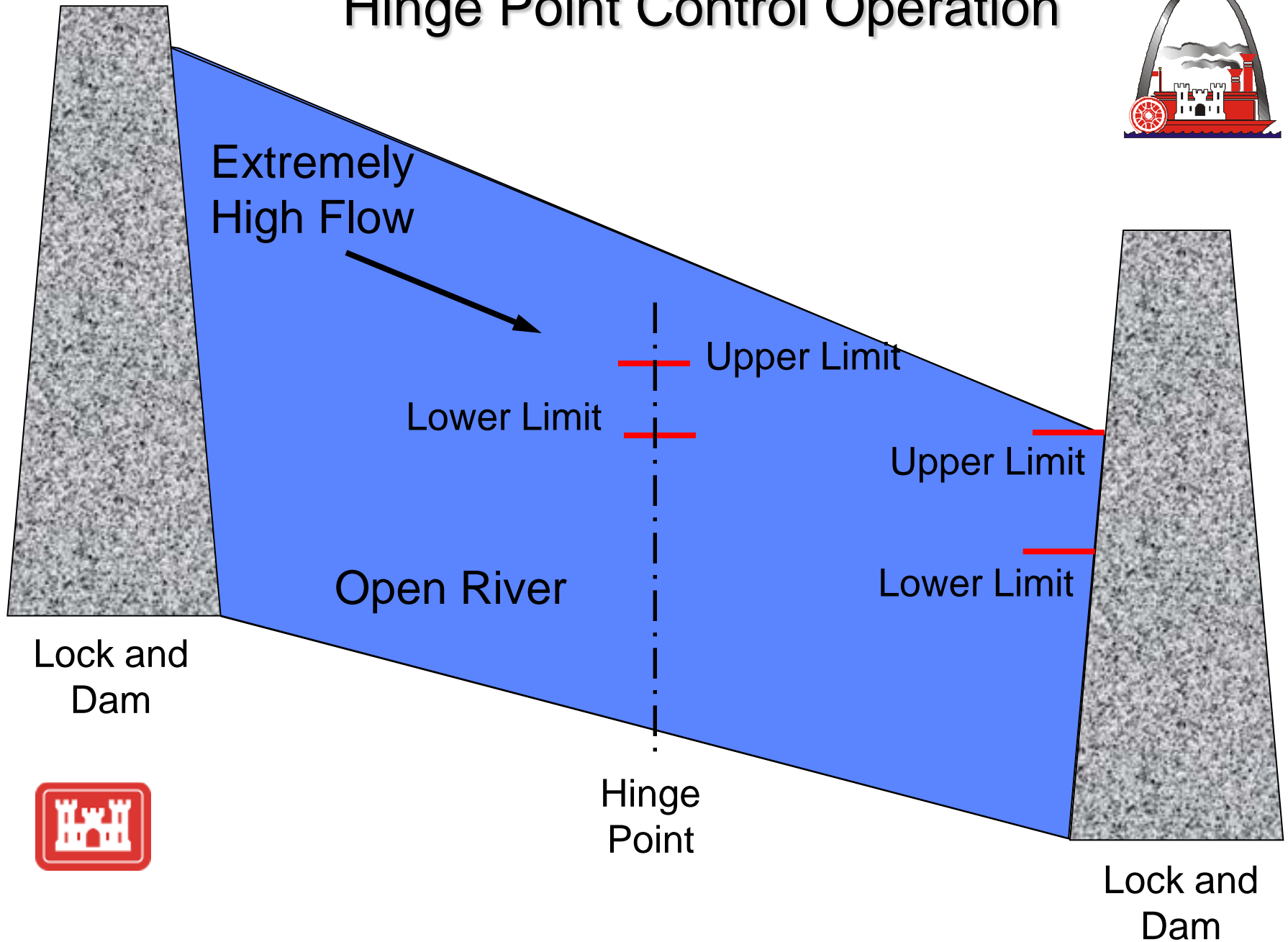
Lower Limit



Lock and Dam

Open River

Hinge Point Control Operation



Lock and Dam 22

- Maintained by the Rock Island District Army Corps of Engineers
- Pool Limits
 - Limits: 13.0 – 13.5 ft. (Stage)



MVS Lock and Dam Hinge Points and Limits

- Lock and Dam 24
 - Pool Limits: 445.5 - 449.0
 - Hinge Point Limits, Louisiana: 11.5 - 12.2 (May be exceeded if at maximum drawdown)
- Lock and Dam 25
 - Pool Limits: 429.7 - 434.0
 - Hinge Point Limits, Mosier Landing: 434.0 - 437.0 (May be exceeded if at maximum drawdown)
- Melvin Price Locks and Dam
 - Pool Limits: 412.5 - 419.0 Alton Lower Limit: 414.0
 - Hinge Point Limits, Grafton: 14.2 - 16.2 (May be exceeded if at maximum drawdown, or Alton at 414.0)
- Kaskaskia Lock and Dam
 - Pool Limits: 363.0 - 368.8
 - Hinge Point, Red Bud: 368.0 - 370.0 (May be exceeded if at maximum drawdown)



Environmental Pool Management (EMP)

- Environmental pool is managed within hinge point limits.
 - If the pool is lowered below the defined EMP limits it is due to the upper limits of the hinge point being encroached upon.
 - Time Frame (pending upon flows): April thru July (ideally 60 days)
- Lock and Dam 24
 - EMP Limits: 447.5 – 449.0 ft.
- Lock and Dam 25
 - EMP Limits: 432.0 – 434.0 ft.
- Melvin Price Locks and Dam
 - Limits: 418.0 - 419.0 ft.



Definition of Terms

- **Crest** – the highest stage or level of a flood wave as it passes a point.
- **Cubic Feet per Second (cfs)** – the flow rate or discharge equal to one cubic foot of water per second or about 7.5 gallons per second.
- **Day Second Feet (dsf)** – an average of the cfs throughout the day, a volume equivalent to 1 cfs for 1 day, 86,400 ft³.
- **Flood Frequency** - The calculation of the statistical probability that a flood of a certain magnitude for a given river will occur in a certain period of time. Each flood of the river is recorded and ranked in order of magnitude with the highest rank being assigned to the largest flood.
- **Flood Level/Stage** – the stage at which overflow of the natural banks of a stream begins to cause damage in the reach in which the elevation is measured
- **Gage Zero** – the arbitrary "zero plane" from which all stage measurements are taken from. Usually set below the natural bottom of the channel so all stage height readings will be greater than zero
- **G.O.E.S. Telemetered Data Collection Platform (DCP)** –This satellite-based system collects a variety of environmental data from locations in the western hemisphere.
- **Hydrograph** – A graphical representation of stage, flow, velocity, or other characteristics of water at a given point as a function of time. .
- **National Geodetic Vertical Datum (NGVD)** – also known as mean sea level, is defined by the observed heights of 26 tide gauges, located around North America, and by the set of elevations of all bench marks, resulting from the adjustment.
- **Period of Record** – the record of the gage's data from the first to last day data was collected



Definition of Terms

- **Pressure Transducer** – An instrument component that detects a fluid pressure and produces an electrical signal related to the pressure. Also known as electrical pressure transducer.
- **Pool Level** - The stage or elevation of water measured on the upstream side of a dam.
- **River Mile** – just like a highway mile marker, there are mile markers along the river that start at 0 at the river's mouth and increases moving upstream.
- **Slope Gage** – an inclined staff gage. Typically placed on the slope of the river bank.
- **Staff Gage** – a simple non-recording gage that is either mounted vertical or inclined and can be used as a reference gage in a stream or river as an outside gage.
- **Stage** – the height of a water surface above an established "zero" plane, or datum
- **Tailwater Level** - The stage or elevation of water measured on the downstream side of a dam.
- **Watershed** - An area of land that drains to a single outlet and is separated from other watersheds by a divide.
- **Wire Weight** – this gage obtains a manual reading of the river level by lowering a weight on a wire, that is mounted over the water surface, until it touches the water surface.

